VOLTAGE DROP CALCULATION

DUNN OPERATIONS CENTER - MOBILE SUBSTATION STORAGE
1269 JONESBORO ROAD
HARNETT COUNTY, N.C. 28334

FACP #	1	DGP / XPDR #	0
POWER SUPPLY #	0	CIRCUIT #	5

NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

18 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	45	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR.	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	20.20	0.197	0.97%
2	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	30	20.09	0.310	1.52%
3	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	30	20.00	0.404	1.98%
4	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.88	0.517	2.53%
5	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	30	19.83	0.573	2.81%
6	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	45	19.77	0.629	3.09%
7	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	30	19.75	0.648	3.18%
			TOTAL:	0.714	255	END OF LINE VOLTAGE:		19.75

POINT TO POINT METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.714	255	0.648	19.75	3.18%		YES

END OF LINE METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS	
0.714	255	1.118	19.28	5.48%		YES

VOLTAGE DROP CALCULATION

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1269 JONESBORO ROAD
HARNETT COUNTY, N.C. 28334

FACP #	1	DGP / XPDR #	0
POWER SUPPLY #	0	CIRCUIT #	6

NOMINAL VOLTAGE:	20.4
MINIMUM VOLTAGE:	16

END OF LINE AND LOAD CENTERING METHODS USE ONLY THE WIRE GAUGE FOR THE FIRST DEVICE TO SOURCE

1 8 - 14 AWG = SOLID CONDUCTORS / 12 - 10 AWG = STRANDED CONDUCTORS

		GAUGE	OHM'S
DISTANCE FROM SOURCE TO 1ST DEVICE:	65	14	3.07
WIRE GAUGE FOR BALANCE OF CIRCUIT:		14	3.07

STANDARD WIRE RESITANCE IN OHMS PER 1000 FEET				
18 = 7.77	16 = 4.89	14 = 3.07	12 = 1.98	10 = 1.24

DEVICE NUMBER	DEVICE DESCRIPTION	DEVICE MFR.	MODEL NUMBER	DEVICE CURRENT	DISTANCE FROM LAST DEVCIE	VOLTAGE AT DEVCIE	VLTG. DROP FROM SOURCE	VOLTAGE % DROP
1	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	65	20.28	0.117	0.57%
2	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	35	20.23	0.175	0.86%
3	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	45	20.16	0.243	1.19%
4	STROBE [CEILING MOUNTED] [15CD]	SIEMENS	SL2S(W/R)-F	0.022	30	20.12	0.285	1.40%
5	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	50	20.05	0.347	1.70%
6	HORN STROBE [CEILING MOUNTED] [110CD]	SIEMENS	SL2HSC(W/R)-F	0.102	30	20.03	0.366	1.79%
			TOTAL:	0.292	255	END OF LINE VOLTAGE:		20.03

POINT TO POINT METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS
0.292	255	0.366	20.03	1.79%	YES

END OF LINE METHOD

CURRENT	DISTANCE	VOLTAGE DROP	END OF LINE VOLTAGE	PERCENTAGE DROP	CIRCUIT WITHIN LIMITS
0.292	255	0.457	19.94	2.24%	YES